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10/748,032	12/30/2003	Mang Zhu	CS23259RL	6749

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EXAMINER	
FERGUSON, KEITH	

ART UNIT	PAPER NUMBER
2618	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/748,032	ZHU ET AL.	
	Examiner	Art Unit	
	Keith T. Ferguson	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) *10-12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 13-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,3-4,7-9,13,14 and 17-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Balachandran et al. (2005/0054331) in view of Sinnarajah et al. (U.S. Patent 6,876,636).

Regarding claims 1,7-9, Balachandran et al. discloses a method (paragraph 0017 lines 1-9) in a wireless broadcast/multicast service subscriber user device (mobile station, remote station, etc) (abstract and paragraph 0017 lines 1-9 and paragraph 0023 lines 1-5), the method comprising: determining a slot to monitor for paging information (paragraph 0030 lines 1-10 and paragraph 0037 line 1 through paragraph 0038 line 12); obtaining a broadcast service parameter message (BSPM) (broadcast/multicast service information) by monitoring the slot for paging information indicating the availability of the broadcast/multicast service (i.e. the user detects the BSPM indicators are "ON" for a given broadcast multicast service content (i.e. content source), then the user monitors the broadcast) (paragraph 0028 lines 1-14 and paragraph 0037 line 1 through paragraph 0038 line 11). Balachandran et al. differs from claim 1 of the present invention in that it does not disclose determining a paging slot to monitor based on the

broadcast/multicast service identification information. Sinnarajah et al. teaches a method (fig. 6), determining a paging slot to monitor based upon a mapping function (selecting) e.g. a hash function the broadcast/multicast service identification information (col. 12 lines 37-55) , the broadcast/multicast service identity identifying the determined paging slot (col. 12 lines 37-55); sending the broadcast/multicat service information (col. 8 lines 47-60, col. 10 lines 60-63 and col. 12 lines 34-59) on the determined paging slot wherein a subscriber station determines a paging slot number (slot 0) (col. 13 lines 1-20) based upon a hash function used by the broadcast sector server for the subscriber (col. 12 line 37 through col. 13 line 20) based upon a broadcast multicast paging channel (MCP) which includes the group paging message (GPM) which identifies subscribers which the message is intended (col. 1 2 line 37 through col. 13 line 20). A sector (S) (server) creates a MPC containing the group ID and the number of slots of the MPCY into a mapping function (i.e. slot_0) (col. 13 lines 4-12). A subscriber determines which slot to monitor, detect that BI bit in the slot 0_q is set to on, and wake up for monitoring of Slot 0_p the sector transmits (col. 13 lines 4-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Balachandran et al. with determining a paging slot to monitor based on the broadcast/multicast service identification information in order for users (mobiles) to save battery power by knowing the paging slot to monitor based upon the broadcast multicast service message which identifies the users, as taught by Sinnarajah et al..

Regarding claim 3, Balachandran et al. discloses obtaining a broadcast/multicast service (BCMCS) (broadcast/multicast service identification information) from a wireless message received (paragraph 0028 lines 1-14 and paragraph 0037 line 1 through paragraph 0038 line 11, and P:0045 line 1 through P:0046 line 10).

Regarding claim 4, Balachandran et al. discloses obtaining the broadcast/multicast service identification information from a system overhead message received by the wireless broadcast/multicast service subscriber device (paragraph 0028 lines 1-14).

Regarding claims 13,18 and 20, Balachandran et al. discloses a method in a wireless communications network providing broadcast/multicast services (abstract, paragraph 0017 lines 1-9 and paragraph 0022 line 1 through paragraph 0026 line 13), the method comprising: sending a broadcast/multicast service (BCMCS) (broadcast/multicast service identification information) to users (subscribers) of a corresponding broadcast/multicast service (paragraph 0028 lines 1-14 and paragraph 0037 line 1 through paragraph 0038 line 11). Balachandran et al. differs from claims 13 and 18 of the present invention in that it does not disclose determining a paging slot to monitor based on the broadcast/multicast service identification information, the broadcast/multicast service identity identifying the determined paging slot; sending the broadcast/multicat service information on the determined paging slot. Sinnarajah et al. teaches a method (fig. 6), determining a paging slot to monitor based upon a mapping

function (selecting) e.g. a hash function the broadcast/multicast service identification information (col. 12 lines 37-55) , the broadcast/multicast service identity identifying the determined paging slot (col. 12 lines 37-55); sending the broadcast/multicat service information (col. 8 lines 47-60, col. 10 lines 60-63 and col. 12 lines 34-59) on the determined paging slot wherein a subscriber station determines a paging slot number (slot 0) (col. 13 lines 1-20) based upon a hash function used by the broadcast sector server for the subscriber (col. 12 line 37 through col. 13 line 20) based upon a broadcast multicast paging channel (MCP) which includes the group paging message (GPM) which identifies subscribers which the message is intended (col. 1 2 line 37 through col. 13 line 20). A sector (S) (server) creates a MPC containing the group ID and the number of slots of the MPCY into a mapping function (i.e. slot_0) (col. 13 lines 4-12). A subscriber determines which slot to monitor, detect that BI bit in the slot 0_q is set to on, and wake up for monitoring of Slot 0_p the sector transmits (col. 13 lines 4-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Balachandran et al. with determining a paging slot to monitor based on the broadcast/multicast service identification information, the broadcast/multicast service identity identifying the determined paging slot; sending the broadcast/multicat service information on the determined paging slot in order for the sector server (s) to provide users (mobiles) a paging slot to monitor wherein the user saves battery power by knowing the paging slot based upon the broadcast multicast service message which identifies the users, as taught by Sinnarajah et al..

Regarding claims 14 and 19, Balachandran et al. discloses a unique flow identification (BCMCS flow ID) in a paging slot for subscribers less likely than other paging slots to be monitored by non-subscribers of a broadcast-multicast service (paragraph 0028 lines 1-17).

Regarding claim 17, Balachandran et al. discloses a broadcast/multicast identity based on a hash function (paragraph 0042 lines 1-5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5,6,15,16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Balachandran et al. in view of Sinnarajah et al. as applied to claims 1,2,13,17 and in further view of Collins et al..

Regarding claims 5 and 6, the combination of Balachandran et al. and Sinnarajah et al. differs from claims 5 and 6 of the present invention in that they do not disclose obtaining updated broadcast/multicast service identification information, determining a new slot to monitor based on the updated broadcast/multicast service identification information, determining broadcast/multicast service availability by monitoring the new

slot for paging information indicating the availability of the broadcast/multicast service. Collins et al. discloses a subscriber station which receives multicast/broadcast information (col. 2 lines 12-61). The subscriber station receives a new page indicator in each slot on a paging channel (col. 3 lines 30-38 and col. 12 lines 1-54). The page indicator is used for the subscriber station to determine to monitor for new broadcast pages (col. 3 lines 30-38 and col. 12 lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Balachandran et al. and Sinnarajah et al. with obtaining updated broadcast/multicast service identification information, determining a new slot to monitor based on the updated broadcast/multicast service identification information, determining broadcast/multicast service availability by monitoring the new slot for paging information indicating the availability of the broadcast/multicast service in order for the user equipment to only monitor for contents it wishes to receive, which results in power saving within the user device, as taught by Collins et al..

Regarding claims 15 and 21, the combination of Balachandran et al. and Sinnarajah et al. differs from claims 15 and 21 of the present invention in that they do not disclose determining a new paging slot; sending a new broadcast/multicast service identity to subscribers of the broadcast/multicast service, the new broadcast/multicast service identity identifying the new paging slot; sending broadcast/multicast service information on the new paging slot. Collins et al. discloses a subscriber station which

receives multicast/broadcast information (col. 2 lines 12-61). The subscriber station receives a new page indicator in each slot on a paging channel. The page indicator is used for the subscriber station to determine to monitor for new broadcast pages (col. 3 lines 30-38 and col. 12 lines 1-54). Collins et al. discloses a system (fig. 1) broadcast a multicast/broadcast information to a receiver (col. 2 lines 12-61). The system sends a new page indicator in each slot on a paging channel to a receiver station (col. 3 lines 30-38 and col. 12 lines 1-54). The page indicator is used for the subscriber station to determine to monitor for new broadcast pages (col. 3 lines 30-38 and col. 12 lines 1-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Balachandran et al. and Sinnarajah et al. with determining a new paging slot; sending a new broadcast/multicast service identity to subscribers of the broadcast/multicast service, the new broadcast/multicast service identity identifying the new paging slot; sending broadcast/multicast service information on the new paging slot in order for the network to provide broadcast contents to the user equipment which the user subscribes which allows the user equipment to only monitor for contents it wishes to receive, which results in less network resources being used by not broadcasting contents the user does not want, as taught by Collins et al.

Regarding claim 16, Balachandran et al. discloses a unique flow identification (BCMCS flow ID) in a paging slot for subscribers less likely than other paging slots to

be monitored by non-subscribers of a broadcast-multicast service (paragraph 0028 lines 1-17).

Response to Arguments

5. Applicant's arguments filed July 29, 2008 have been fully considered but they are not deemed to be persuasive. The following are explanations to the applicant arguments:

1. Argument: Regarding claims 1, 13 and 18, applicant alleges that Sinnarajah et al. does not disclose determining the paging slot to monitor" ... based on the broadcast/multicast service identification information.

Explanation: Examiner respectfully disagrees because Sinnarajah et al. teaches a subscriber stations monitors a broadcast paging cycle (BPC) which is replaced with a multicast paging cycle (MPCY) (col. 8 lines 47-60, col. 10 lines 60-63 and col. 12 lines 34-59) where the subscriber uses a hash function within the multicast paging cycle to determine the slot to monitor (col. 12 lines 34-59). Sinnarajah et al. further discloses since the subscriber is given a group ID the subscriber may use the hash function to determine the F-QPCH slot to monitor to monitor to read the BI indicator which reduces

a probability of a false alarm, i.e. the subscriber station waking for a MCP for a multicast group to which the subscriber station does not belong. (col. 12 lines 53-59). For example, a sector (S) (server) creates a MPC containing the group ID and the number of slots of the MPCY into a mapping function (col. 13 lines 4-8). A subscriber determines which slot to monitor, detect that BI bit in the slot 0_q is set to on, and wake up for monitoring of Slot 0_p the sector transmits (col. 13 lines 4-20).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith T. Ferguson whose telephone number is (571) 272-7865. The examiner can normally be reached on 6:30am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maung Nay can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Keith T. Ferguson/
Primary Examiner, Art Unit 2618
October 30, 2008